Los Angeles, California, 23d.—Slight shock of earthquake at 5.00 a. m.; vibration from north to south. Two distinct shocks were felt, separated by an interval of about two seconds.

San Francisco, California, 23d.—Very sharp shock of earthquake of short duration, was felt here and in the surrounding country at 11.40 p. m. The direction of vibration was not determined.

Addison, Maine.—1st, Two shocks of earthquake were felt here during the morning; the first shock was felt at 2.58 a. m., and the second at 8.28 a. m.

SAND-STORMS.

Apache Pass, Arizona, 18th.
Yuma, Arizona, 18th.
Visalia, California, 1st.
West Las Animas, Colorado, 7th, 12th, 18th, 29th.
Fort Union, New Mexico, 7th, 29th, 30th, 31st.
El Paso, Texas, 16th, 18th, 19th.

POLAR BANDS.

Punta Rassa, Florida, 3d.
Yates Centre, Kansas, 2d, 24th, 26th, 30th.
Salina, Kansas, 30th.
Protem, Missouri, 17th, 23d.
Freehold, New Jersey, 23d.
Nashville, Tennessee, 14th, 15th, 17th, 31st.
Wytheville, Virginia, 2d, 12th, 14th, 15th, 21st, 22d, 25th, 26th.
Fort Myer, Virginia, 14th.

ZODIACAL LIGHT.

Little Rock, Arkansas, 25th.
New Haven, Connecticut, 31st.
Wicklow, Dakota, 1st to 5th, 8th, 9th, 10th, 15th, 27th, 28th, 30th, 31st.
Punta Rassa, Florida, 4th, 5th, 8th.
Springfield, Illinois, 28th, 30th, 31st.
Wabash, Indiana, 25th.
Clinton, Iowa, 1st, 2d, 3d, 6th, 8th.
Monticello, Iowa, 27th, 30th, 31st.
Yates Centre, Kansas, 9th, 10th.
Clay Centre, Kansas, 7th.
Orono, Maine, 20th.
Cornish, Maine, 2d.
Cambridge, Massachusetts, visible, 1st to 4th, 7th, 26th, 30th, 31st; suspected, 11th, 12th.
Somerset, Massachusetts, 1st, 2d, 3d, 26th, 30th, 31st.
Rowe, Massachusetts, 31st.
Clinton, Missouri, 1st, 9th.
Mountainville, New York, 31st.
Nashville, Tennessee, 9th, 23d, 24th, 26th, 29th.
Chattanooga, Tennessee, 24th.
New Ulm, Texas, 29th.
Palestine, Texas, 6th, 7th, 9th, 11th, 22d to 25th, 29th.
Variety Mills, Virginia, 27th, 29th, 30th.
Franklin, Wisconsin, 25th.

PRAIRIE FIRES.

Fort Supply, Indian Territory, 29th, 30th.
Creswell, Kansas, 9th, 10th, 31st.
Coleman City, Texas, 7th, 24th, 25th, 29th, 30th.
Fort Concho, Texas, 13th, 24th, 30th.
Fort Elliott, Texas, 12th.
Fort McKavett, Texas, 11th, 12th, 14th, 15th, 17th, 18th, 21st to 26th, 30th, 31st.

DROUGHT.

Bangor, Maine, 31st.—A drought of great severity prevails in this state; it is especially severe in this (Penobscot) county. All mills that are run by water-power have suspended operations. Springs and wells are now exhausted that were never before known to fail. Farmers suffer great inconveniences; in consequence of the drought snow is melted, and water is hauled long distances for stock and domestic purposes.

Charlotte, Vermont, 31st.—Great scarcity of water continues; the wells and streams are very low, necessitating farmers to melt snow for their stock.

Dyberry, Pennsylvania, 31st.—Many streams and wells are dry in this locality.

Litchfield, Michigan, 31st.—Springs are very low for this season of the year.

Topeka, Kansas, 20th.—Owing to protracted drought, wells and cisterns in this vicinity are very low.

Westborough, Massachusetts, 31st.—The streams snd wells are as low as during the severe drought of one-hundred and fifteen days duration of last summer.

MIGRATION OF BIRDS.

Geese flying southward.—Red Bluff, California, 9th, 10th; Fort Madison, Iowa, 30th; Muscatine, Iowa, 4th; Newport, Rhode Island, 9th. *Flying northward.*—Augusta, Georgia, 12th, 13th, 14th; Fort Madison, Iowa, 4th, 13th; Swanwick, Illinois, 28th. *Flying westward.*—Creswell, Kansas, 24th. *Flying eastward.*—Cape Mendocino, California, 21st.

Ducks flying southward.—Erie, Pennsylvania, 10th; Coleman City, Texas, 7th. *Flying northward.*—Fort Macon, North Carolina, 12th.

NOTES AND EXTRACTS.

The following extract is taken from the "Scientific American" Supplement, No. 370, of February 3, 1883.

SURFACE TEMPERATURES IN PARIS.

Edmond and Henri Becquerel have presented to the French Academy their observations upon the temperatures of the air and earth during the year 1880. They find that at the upper surface of the ground, when covered with snow, the temperature was maintained almost constantly in the neighborhood of —1° C. (30.°2 F.), and did not fall below —1°.5 C. (29°.3 F.), although the temperature of the air, as well as that of the upper surface of the snow, varied from —15° C. (5° F.), to 0° C. (32° F.). The diurnal variations of temperature at the surface of the soil were perceptible under a mass of snow of 0.25 meters thickness (9.84 inches), but they never exceed a few tenths of a degree; moreover, the differences in the observed temperatures at different depths in the snow varied nearly in proportion to the depth. These results show that a bed of snow, when the temperature is below 0° C. (32° F.), has a feeble conductivity, and behaves like a conducting body traversed by a calorific wave. Under a surface which is covered by turf, the variations are much more feeble than under a surface of gravel or loam. The network of rootlets constitutes an almost complete non-conductor. Each bed of soil is submitted to the influence of two calorific effects; one due to the variations of external temperature; the other to the action of the deep layers which tend to produce a constant temperature. The amplitude of thermometric oscillation which results from these complex effects, when there is any disturbing influence, such as an infiltration of water, varies inversely with the depth of the bed.—*Comptes Rendus*.

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